

ABSTRACT OF THE DISCLOSURE

A method and apparatus for a trace end predictor for a trace cache is disclosed. In one embodiment, the trace end predictor may have one or more buffers to contain a head address for a subsequent
5 trace. The head address may include the way number and set number of the next head, along with partial stew data to support additional execution predictors. The buffers may also include tag data of the current trace's tail address, and may additionally include control bits for determining whether to replace the buffer's contents with
10 information from another trace's tail. Reading the next head address from the trace end predictor, as opposed to reading it from the trace cache array, may reduce certain execution time delays.